

PROJECT DESCRIPTION
GENERAL

This project includes the construction of five new traffic signals at MD 158 (Bethlehem Boulevard), one new signal at MD 157 (Peninsula Expressway) and one new signal at MD 151 (North Point Boulevard) during the Dualization of I-695 from Bear Creek to 151 (North Point Boulevard) and interchange improvements. MD 158 (Bethlehem Boulevard) is assumed to run in an east-west direction. MD 157 (Peninsula Expressway) and MD 151 (North Point Boulevard) are assumed to run in a north-south direction.

INTERSECTION OPERATION

The intersection of MD 158 (Bethlehem Boulevard) and MD 157 (Peninsula Expressway) will operate in a NEMA four-phase fully-traffic-actuated mode with eastbound MD 158 (Bethlehem Boulevard) operating concurrently with either westbound MD 158 or the eastbound to northbound exclusive/permissive left turn movement. MD 157 (Peninsula Expressway) approach will operate alone.

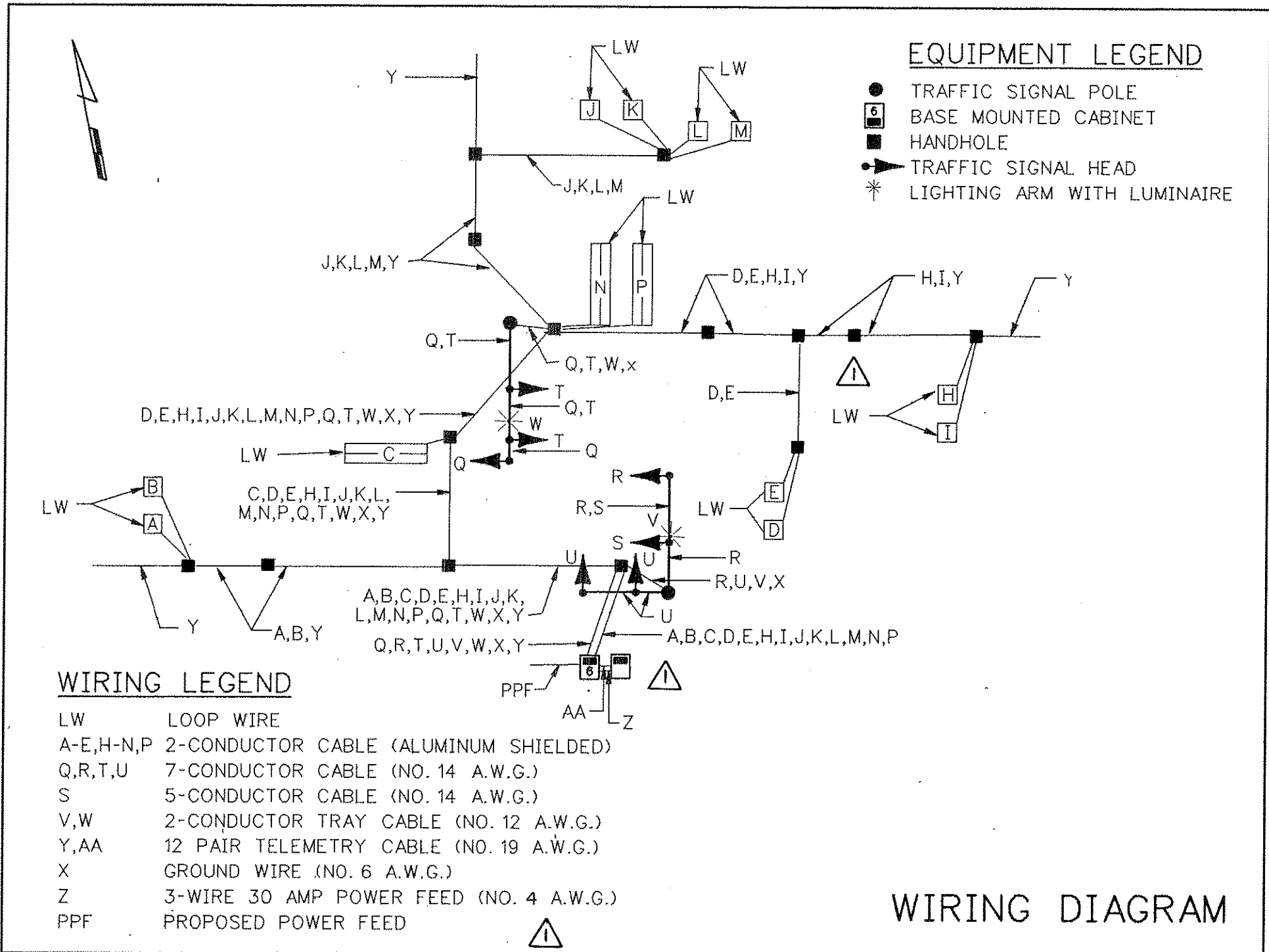
Eight phase (fully-actuated) traffic signal controller and system ready base-mounted cabinet, and eight (8) two-channel loop detector amplifiers will be installed at this intersection.

CONSTRUCTION DETAILS

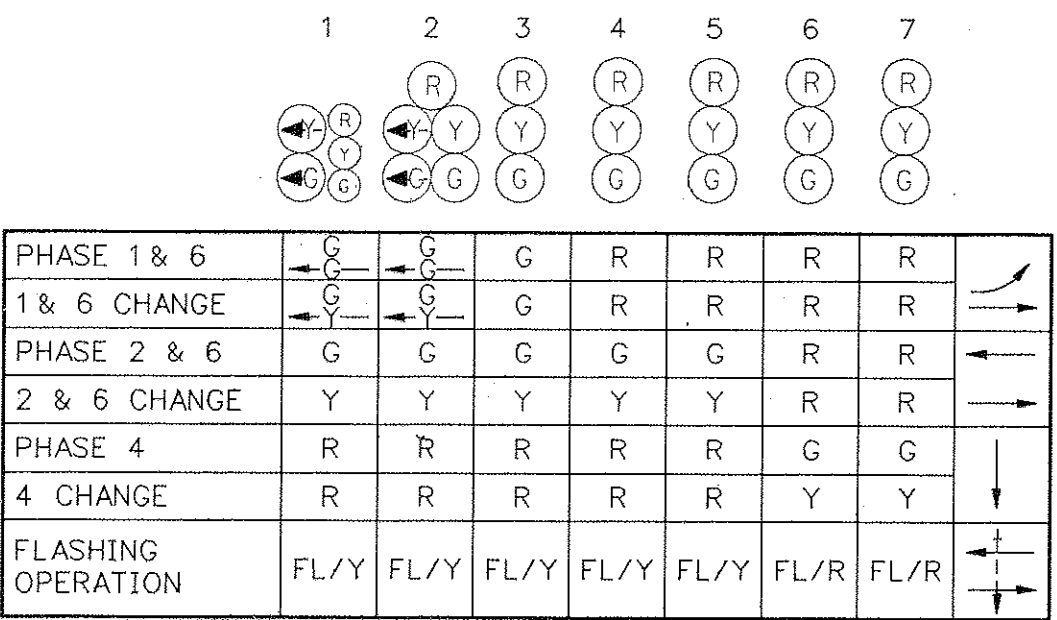
- A. Install 27' steel pole with single 32' mast arm with traffic signal heads and signs, 20' lighting arm and luminaire, as shown (NOTE: 2-3" PVC 90 degree angle conduit bend).
- △ B. Install 27' steel pole with twin 32' and 46' mast arms with traffic signal heads and signs, 20' lighting arm and luminaire, as shown (NOTE: 2-3" PVC 90 degree angle conduit bend).
- △ C. Install traffic signal controller with control and distribution equipment (see drawing B-2) eight (8), two-channel loop detector amplifiers and one (1) additional detector board in base-mounted, system-ready cabinet. (NOTE: 2-2" PVC 90 degree angle (schedule 80) conduit bends, 2-4" PVC 90 degree angle conduit bends, and 2-3" PVC 90 degree angle conduit bends).
- D. Install handhole.
- E. Install 1" electrical conduit detector wire sleeve.
- F. Not used.
- G. Install 2" schedule 80 electrical conduit-trenched/buried.
- H. Install 3" schedule 40 electrical conduit-trenched/buried.
- I. Install 4" schedule 40 electrical conduit-trenched/buried.
- J. Install 4" schedule 80 electrical conduit-trenched/buried.
- K. Install 2-4" schedule 40 electrical conduit-trenched/buried.
- L. Install 6'x 30' loop detector quadrupole type (2-4-2 turns).
- M. Install 6'x 6' advance loop detector, (3-turns).
- N. Install 6'x 6' sampling station loop detector, (3-turns).
- O. Not used.
- P. Install 24" solid white stop line.
- △ R. Install traffic responsive master controller and cabinet base-mounted. (NOTE: 1-3" PVC 90 degree angle conduit bend and 1-2" PVC 90 degree angle (schedule 80) conduit bend).
- S. Install 2" schedule 80 and 3" schedule 40 electrical conduit - trenched/buried.

GENERAL NOTES

- Geometrics shall be confirmed prior to the installation of signal equipment.
- Loop detectors and conduits shall be installed prior to the installation of pavement markings.
- All utilities are shown in their approximate location and are not to be considered as complete. The Contractor shall be responsible for contacting Miss Utility to verify the location of all utilities. The Contractor shall contact The project Engineer prior to construction if there may be potential conflicts.
- Pavement markings detailed are proposed and are to be installed by the Contractor in accordance with S.H.A. standards. All other pavement markings will be installed as part of the highway contract.
- All luminaires have to be full cut off.
- "D.O." indicates delay output loop detector.

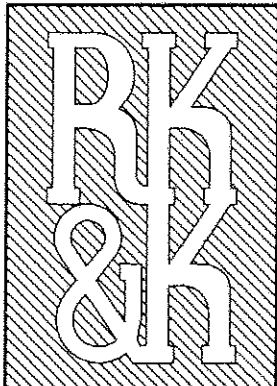


WIRING DIAGRAM



PHASE SEQUENCE CHART

SS-02



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REVISIONS:	APPROVALS:
△ ADDENDUM NO.1 4-24-95	
	CHIEF SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER TRAFFIC
	CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR OFFICE OF TRAFFIC & SAFETY

MDOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION LOG MILE #030158	
DRAWN BY: ZAJ DES. BY: ZAJ CHK. BY: Steve Ray 3/23/95	MD 158 (BETHLEHEM BOULEVARD) @ MD 157 (PENINSULA EXPRESSWAY) GENERAL INFORMATION COUNTY: BALTIMORE
DATE: MARCH, 1995 SCALE: 1"=20'	F.A.P. NO. S.H.A. NO. KB-421-000-006
TS/STD. NO.: TS-3508GI-1	374 OF 447